

# **DHEC's Office of Solid Waste Reduction and Recycling**



## **HIGH SCHOOL PROGRAMS**

# High School History



- Green Driver Project
- Take Action for the Environment
- Action in the classroom

# Green Driver Project



AN ENVIRONMENTAL LESSON  
“OIL AND WATER” FOR HIGH  
SCHOOL DRIVERS EDUCATION  
FROM SC DHEC

# Test Your Knowledge

- You may be fined how much money if you illegally dispose of your motor used oil?

- ✦ A. \$1,000
- ✦ B. \$10,000
- ✦ C. \$100

- How many gallons of water can be contaminated by illegally dumping 1 gallon of used motor oil?

- ✦ A. 500
- ✦ B. 1 million
- ✦ C. 10,000



# Test Your Knowledge



- The majority of used oil collected from DIYers in South Carolina is burned as a fuel substitute for coal to generate electricity at Santee Cooper generating facilities.
- True or False

# Proper Maintenance



- Motor oil is needed in the car to lubricate moving metal parts in the engine.
- Oil changes are generally done every 3,000 miles. Although some manufacturers are now recommending longer intervals (e.g., 5,000) miles between oil changes – especially if using synthetic motor oil.
- If half of all Americans do their own oil changes and don't recycle, they could create 200 million gallons of oil pollution per year.

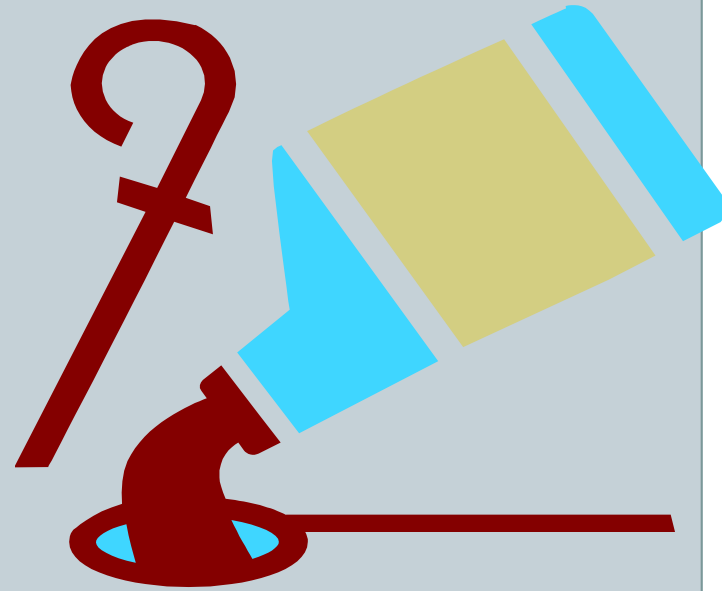
# Used Motor Oil Recycling

SC law says you must recycle used motor oil or you could face fines of up to \$10,000

See where your town or county collects:

- oil/gas mixtures
- transmission fluid
- antifreeze
- car batteries

*1 gallon of used oil=2 1/2 quarts recycled*



# Oil is a Non-renewable Resource

2/3 of our supply comes from foreign countries

The US uses about *21 million barrels* of oil per day. It is used in some form by almost everyone.

- ✦ Motor oil
- ✦ Gas and Diesel Fuel
- ✦ Aviation Fuel
- ✦ Kerosene
- ✦ Home Heating Oil
- ✦ Chemicals for Pesticides and Fertilizer
- ✦ Chemicals for Plastics





# Ecological Concerns



## *Oil Pollution*

Toxic and Carcinogenic substance

Drinking water contamination

*1 gallon oil = 1 million gallons of water  
contaminated*

Oil pollutes the food chain

*One Pint produces 1 Acre oil slick*

# *Gas and Diesel Emissions*

- Carbon Monoxide
- Smog
- Acid Rain
- Carbon Dioxide
  - ✦ Greenhouse Gas
  - ✦ *1 gallon gas = 20 lbs. CO<sub>2</sub>*



# Alternative Fuel Vehicles



- Hybrids/Electric Cars
  - ex. Prius and plug-in Volt
- Natural Gas
- Hydrogen
- Biofuels
  - Ethanol
  - Biodiesel
    - ✦ 6500 miles between oil changes
    - ✦ 30% less CO<sub>2</sub>
    - ✦ No sulfur

# Keep South Carolina Clean



- Don't litter! Fine could be up to \$1000 or community service picking up litter.
- Many objects thrown from cars are harmful to the environment or take many years to decompose.
- If food is thrown along highway it attracts animals causing road kill, collisions with deer
- Someone's broken glass could mean a flat tire for you. Flying litter can crack your windshield.



# How many years to start decomposing ?

- Kind of Litter

- Cigarette Butt
- Plastic Bag
- Tin Can
- Styrofoam Cup
- Aluminum Can
- Plastic Bottle
- Fishing Line
- Glass Bottle



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## Years

5

20

50

50

200

450

500+

1 million



# **Take Action for the Environment**



**ENVIRONMENTAL LITERACY  
FOR HIGH SCHOOL  
ENVIRONMENTAL SCIENCE  
CLASSES  
FROM SC DHEC**

# 2011 Participating Pilot Schools



- AC Flora High – Richland One
- Bethune-Bowman High – Orangeburg Five
- Daniel High – Pickens
- JL Mann High – Greenville
- Lee Central High – Lee
- Manning High – Clarendon Two
- Silver Bluff High – Aiken
- Tamassee Salem High – Oconee
- Wade-Hampton High – Hampton One
- Westside High – Anderson Five





# Program Highlights



- Most students became more aware that they played a role in environmental issues.
- Students took field trips to a local landfill and recycling centers.
- Nine out of ten schools went from no recycling programs to recycling a combination of cardboard, paper, plastic bottles and aluminum cans.
- Schools agreed to continue to work toward reducing trash disposal cost through recycling.



# 2012 Participating Pilot Schools



- Ashley Ridge High - Dorchester
- Gilbert High School – Lexington
- McCormick High School – McCormick
- Mid-Carolina High School – Newberry
- Military Magnet - Charleston
- Newberry High School - Newberry
- Pickens High School – Pickens



# Action in the classroom



AN ENVIRONMENTAL LESSON  
FOR HIGH SCHOOL  
ENVIRONMENTAL SCIENCE  
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# Action in the Classroom



## “Waste Not Want Not” Environmental Lesson for High School Environmental Science Classes



# Test Your Knowledge



- On average, how much solid waste is produced in South Carolina in one day by one person?

✦ 2.5 pounds

✦ 4 pounds

✦ 5 pounds



# Test Your Knowledge



What natural resource is plastic made from?

- Petroleum
- Iron Ore
- Sand
- Bauxite



# Test Your Knowledge



- The three chasing arrows of the recycling symbol mean:
- Reducing, Reusing, Buying Recycled
- Collection, Manufacturing, Buying Recycled
- Rejecting, Collection, Manufacturing



- When your garbage goes to the landfill, it easily decomposes and is no longer harmful to the environment.
- True or False

# Advantages of Recycling



SAVES NATURAL RESOURCES  
SAVES LANDFILL SPACE  
SAVES ENERGY  
ALL OF WHICH, SAVE MONEY





# Let's Sort Your Trash!



- My Bag – Let's sort this bag of CLEAN stuff that I could have thrown away in the landfill.
- Recycle
- Reuse
- Repair
- Compost = Organic Re-use
- Reject = Find Alternative



# Buying Green



- Items made of recycled materials
- CFL bulbs vs. incandescent
- Rechargeable batteries vs. regular alkaline
- Buy local – it's fresher and uses less fuel
- Renewable energy sources
  - Photovoltaic cells = solar panels
  - Wind
  - Water



# Use Resources to Make a Difference



- DHEC's Office of Solid Waste Reduction and Recycling
  - [www.scdhec.gov/recycle](http://www.scdhec.gov/recycle)
  - Recycling Hotline - 1-800-768-7348
- Get to know your County or City Recycling Coordinator
- Already doing environmental projects? Become a Green Steps School: [www.greenstepsschools.com](http://www.greenstepsschools.com)

# Presenter



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